**Hypothesis Testing Basic Exercises Part 1**

1. First Name   
   
2. Last Name   
   
3. Specify the null and alternative hypotheses for the following tests. Use = for equal, <> for not equal, <= for less than and equal, >= for greater than and equal, < for less than, > for greater than.
   1. Test if the mean weight of cereal in a cereal box differs from 18 ounces.   
      
   2. Test if the stock price increases on more than 60% of the trading days.   
      
   3. Test if Americans get an average of less than seven hours of sleep.   
      
4. Find the critical values for the following hypothesis tests. Specify whether the value is a z or t by entering the answer as "z=" or "t=."
   1. H0: μ≤4.5; HA: μ>4.5; α=0.05;n=24   
      
   2. H0: μ=4.5; HA: μ≠4.5; α=0.05;n=24   
      
   3. H0: p≥0.2; HA: p<0.2; α=0.05   
      
5. Calculate the test statistic for the following tests. Find the critical values for the following hypothesis tests. Specify whether the value is a z or t by entering the answer as "z=" or "t=."
   1. H0: μ≤4.5; HA: μ>4.5; x-bar =4.8; s=0.8; n=24   
      
   2. H0: p=0.2; HA: p≠0.2; p-bar = 0.23; n = 30   
      
6. Consider the following hypotheses: H0: μ ≤ 210; HA: μ > 210 Approximate the p-value for this test based on the following sample information.
   1. x-bar = 216, s = 26, n = 40   
        
      *Enter a numeric response.*
   2. x-bar = 216, s = 26, n = 80   
        
      *Enter a numeric response.*
   3. x-bar = 216, s = 16, n = 40   
        
      *Enter a numeric response.*
7. Consider the following hypotheses: H0: p ≤ 0.5; HA: p > 0.5 Approximate the p-value for this test based on the following sample information.
   1. p-bar = 0.55; n = 50   
        
      *Enter a numeric response.*
   2. p-bar = 0.55; n = 200   
        
      *Enter a numeric response.*

**Hypothesis Testing Basic Exercises Part 2**

1. First Name   
   
2. Last Name   
   
3. Specify the null and alternative hypotheses for the following claims. Use = for equal, <> for not equal, <= for less than and equal, >= for greater than and equal, < for less than, > for greater than.
   1. "I am going to get the majority of votes to win this election."   
      
   2. "I suspect that your 10” pizzas are, on average, less than 10” in size."   
      
4. Find the critical values for the following hypothesis tests. Specify whether the value is a z or t by entering the answer as "z=" or "t=."
   1. H0: μ≥4.5; HA: μ<4.5; α=0.05; n=24   
      
   2. H0: p≤0.2; HA: p>0.2; α=0.05   
      
   3. H0: p=0.2; HA: p≠0.2; α=0.05   
      
5. Calculate the test statistic for the following tests. Find the critical values for the following hypothesis tests. Specify whether the value is a z or t by entering the answer as "z=" or "t=."
   1. H0: μ≥200; HA: μ<200; x-bar=196; s=0.98; n=26   
      
   2. H0: p=0.3; HA: p≠0.3; p-bar = 0.27; n = 30   
      
6. Consider the following hypotheses: H0: μ = 12; HA: μ ≠ 12 Approximate the p-value for this test based on the following sample information.
   1. x-bar = 11, s = 3.2, n = 36   
        
      *Enter a numeric response.*
   2. x-bar = 11, s = 2.8, n = 36   
        
      *Enter a numeric response.*
   3. x-bar = 11, s = 2.8, n = 49   
        
      *Enter a numeric response.*